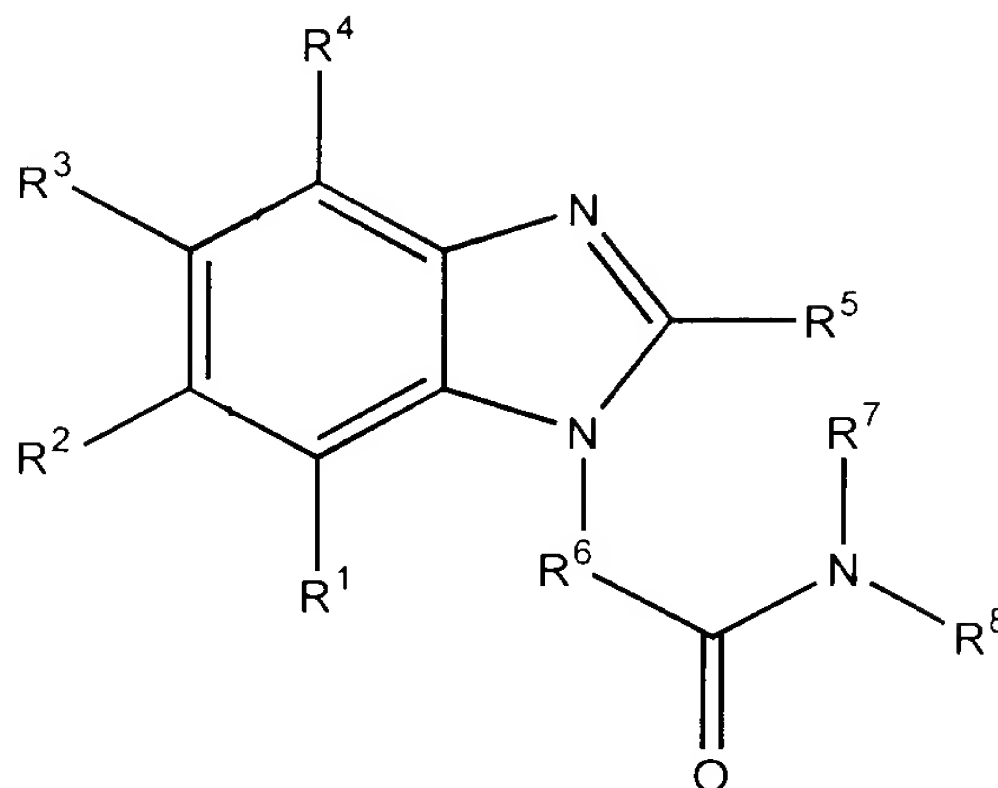


WE CLAIM:

1. A combinatorial library of two or more compounds of the formula:



5 wherein:

R¹, R², R³ and R⁴ are, independently, selected from the group consisting of a hydrogen atom, halo, hydroxy, protected hydroxy, cyano, C₁ to C₆ alkyl, C₁ to C₆ alkenyl, C₁ to C₆ alkynyl, C₁ to C₆ substituted alkyl, C₁ to C₆ substituted alkenyl, C₁ to C₆ substituted alkynyl, C₁ to C₆ alkoxy, C₁ to C₆ substituted alkoxy, C₁ to C₆ acyloxy, C₁ to C₆ acyl, C₁ to C₆ cycloalkyl, C₁ to C₆ substituted cycloalkyl, C₁ to C₆ cycloalkenyl, C₁ to C₆ substituted cycloalkenyl, heterocyclic ring, substituted
10 heterocyclic ring, C₁ to C₆ phenylalkyl, C₁ to C₆ substituted phenylalkyl, C₁ to C₆ heterocycloalkyl, C₁ to C₆ substituted heterocycloalkyl, phenyl, substituted phenyl, naphthyl, substituted naphthyl, cyclic C₁ to C₆ alkylene, substituted cyclic C₁ to C₆ alkylene, cyclic C

to C heteroalkylene, substituted cyclic C to C
heteroalkylene, carboxy, protected carboxy,
hydroxymethyl, protected hydroxymethyl, protected amino,
(monosubstituted)amino, protected (monosubstituted)amino,
5 (disubstituted)amino, C₁ to C₄ alkylamino, C₁ to C₄
substituted alkylamino, carboxamide, protected
carboxamide, C₁ to C₄ alkylthio, C₁ to C₄ substituted
alkylthio, C₁ to C₄ alkylsulfonyl, C₁ to C₄ substituted
alkylsulfonyl, C₁ to C₄ alkylsulfoxide, C₁ to C₄
10 substituted alkylsulfoxide, phenylthio, substituted
phenylthio, phenylsulfoxide, substituted phenylsulfoxide,
phenylsulfonyl, substituted phenylsulfonyl and the group
consisting of (i) the formula -C(O)NR¹R², (ii) the
formula -C(O)R³, (iii) the formula -NR¹R², (iv) the
15 formula -SR³, (v) the formula -OR³ and (vi) the formula
-C(O)OR³, wherein R¹ and R² are, independently, selected
from the group consisting of a hydrogen atom, C₁ to C₄
alkyl, C₁ to C₄ substituted alkyl, C₁ to C₄ alkenyl, C₁ to
C₄ substituted alkenyl, phenyl, substituted phenyl,
20 naphthyl, substituted naphthyl, C₁ to C₄ phenylalkyl, C₁
to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl,
C₁ to C₄ substituted heterocycloalkyl, heteroaryl,
substituted heteroaryl, heterocycle, substituted
heterocycle, phenylsulfonyl, substituted phenylsulfonyl,
25 C₁ to C₄ alkylsulfonyl, C₁ to C₄ substituted
alkylsulfonyl, C₁ to C₄ alkylaminocarbonyl, C₁ to C₄
substituted alkylaminocarbonyl, phenylaminocarbonyl, and
substituted phenylaminocarbonyl;

R is selected from the group consisting of a hydrogen
30 atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, phenyl,
substituted phenyl, C₁ to C₄ phenylalkyl, C₁ to C₄
substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to
C₄ substituted heterocycloalkyl, carboxy, protected

carboxy, cyano, protected (monosubstituted) amino,
(disubstituted) amino, C₁ to C₆ acyl, C₁ to C₆ substituted
acyl, C₁ to C₆ alkoxycarbonyl, C₁ to C₆ substituted
alkoxycarbonyl, heterocycle, substituted heterocycle,
5 naphthyl, substituted naphthyl, C₁ to C₆ cycloalkyl, C₁ to
C₆ substituted cycloalkyl, C₁ to C₆ cycloalkenyl and C₁ to
C₆ substituted cycloalkenyl;

R² is the formula:

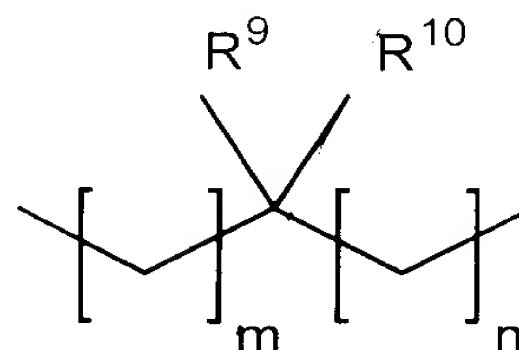
-D-W-E-

10 wherein:

W is absent or selected from the group
consisting of phenylene, substituted phenylene,
C₁ to C₆ cycloalkylene, C₁ to C₆ substituted
cycloalkylene, C₁ to C₆ cycloalkenylene, C₁ to C₆
15 substituted cycloalkenylene, arylene,
substituted arylene, heterocyclene, substituted
heterocyclene, heteroarylene and substituted
heteroarylene;

and D, which is directly attached to the
20 nitrogen depicted in the formula, and E, which
can be absent, are, independently, selected
from the group consisting of C₁ to C₆ alkylene,
C₁ to C₆ alkenylene, C₁ to C₆ alkynylene, C₁ to
C₆ substituted alkylene, C₁ to C₆ substituted
25 alkenylene, C₁ to C₆ substituted alkynylene, C₁
to C₆ cycloalkylene, C₁ to C₆ substituted
cycloalkylene, C₁ to C₆ cycloalkenylene, C₁ to C₆
substituted cycloalkenylene, C₁ to C₆
phenylalkylene, C₁ to C₆ substituted

phenylalkylene, C₁ to C₄ heterocycloalkylene
and C₁ to C₄ substituted heterocycloalkylene,
-NH- and the formula:



5 wherein R⁹ and R¹⁰ are, independently, selected
from the group consisting of a hydrogen atom, C₁
to C₄ alkyl, C₁ to C₄ alkenyl, C₁ to C₄
alkynyl, C₁ to C₄ substituted alkyl, C₁ to C₄
substituted alkenyl, C₁ to C₄ substituted
10 alkynyl, C₁ to C₄ acyl, C₁ to C₄ substituted
acyl, C₁ to C₄ cycloalkyl, C₁ to C₄ substituted
cycloalkyl, C₁ to C₄ cycloalkenyl, C₁ to C₄
substituted cycloalkenyl, a heterocyclic ring,
substituted heterocyclic ring, heteroaryl,
15 substituted heteroaryl, C₁ to C₄ phenylalkyl, C₁
to C₄ substituted phenylalkyl, C₁ to C₄
heterocycloalkyl, C₁ to C₄ substituted
heterocycloalkyl, C₁ to C₄ phenylalkoxy, C₁ to
C₄ substituted phenylalkoxy, phenyl,
20 substituted phenyl, naphthyl, substituted
naphthyl, cyclic C₁ to C₄ alkylene, substituted
cyclic C₁ to C₄ alkylene, cyclic C₁ to C₄
heteroalkylene, substituted cyclic C₁ to C₄
heteroalkylene, carboxy, protected carboxy,
25 hydroxymethyl and protected hydroxymethyl; and
m and n are, independently, 0, 1, 2, 3 or 4;
and

R and R' are, independently, selected from the group consisting of a functionalized resin, a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, phenyl, substituted phenyl, heterocycle, substituted heterocycle, 5 C₁ to C₄ cycloalkyl, C₁ to C₄ substituted cycloalkyl, C₁ to C₄ cycloalkenyl, C₁ to C₄ substituted cycloalkenyl, C₁ to C₄ alkenyl, C₁ to C₄ substituted alkenyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl and C₁ to C₄ substituted
10 heterocycloalkyl, C₁ to C₄ acyl, C₁ to C₄ substituted acyl, phenylsulfonyl, substituted phenylsulfonyl, C₁ to C₄ alkylsulfonyl, C₁ to C₄ substituted alkylsulfonyl, C₁ to C₄ alkylaminocarbonyl, C₁ to C₄ substituted alkylaminocarbonyl, phenylaminocarbonyl, substituted
15 phenylaminocarbonyl, C₁ to C₄ alkylaminothiocarbonyl, C₁ to C₄ substituted alkylaminothiocarbonyl, phenylaminothiocarbonyl and substituted phenylaminothiocarbonyl;

provided that, where Rⁿ is methylene, at least one of Rⁱ
20 to R^j must be the formula -C(O)NRⁿRⁱ; or

provided that, where Rⁿ is methylene, at least one of Rⁱ
to R^j must be the formula -C(O)Rⁿ, wherein Rⁿ is a
heterocyclic ring or substituted heterocyclic ring,
wherein said ring contains at least one nitrogen atom and
25 wherein said nitrogen atom is attached to the carbonyl
carbon; or

a pharmaceutically acceptable salt of a compound thereof.

2. The combinatorial library of claim 1, wherein:

R^1 , R^2 , R^3 and R^4 are, independently, selected from the group consisting of a hydrogen atom, halo, C_1 to C_6 alkyl, C_1 to C_6 substituted alkyl, carboxy, and the group consisting of (i) the formula $-C(O)NR^5R^6$ and (ii) the formula $-C(O)R^7$, wherein R^5 and R^6 are, independently, selected from the group consisting of a hydrogen atom, C_1 to C_6 alkyl, C_1 to C_6 substituted alkyl, C_1 to C_6 alkenyl, C_1 to C_6 substituted alkenyl, C_1 to C_6 phenylalkyl, C_1 to C_6 substituted phenylalkyl, C_1 to C_6 heterocycloalkyl, C_1 to C_6 substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

3. The combinatorial library of claim 1, wherein:

R^1 , R^2 , and R^3 are each a hydrogen atom and R^4 is selected from the group consisting of halo, C_1 to C_6 alkyl, C_1 to C_6 substituted alkyl, carboxy, and the group consisting of (i) the formula $-C(O)NR^5R^6$ and (ii) the formula $-C(O)R^7$, wherein R^5 and R^6 are, independently, selected from the group consisting of a hydrogen atom, C_1 to C_6 alkyl, C_1 to C_6 substituted alkyl, C_1 to C_6 alkenyl, C_1 to C_6 substituted alkenyl, C_1 to C_6 phenylalkyl, C_1 to C_6 substituted phenylalkyl, C_1 to C_6 heterocycloalkyl, C_1 to C_6 substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

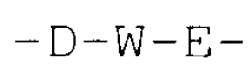
4. The combinatorial library of claim 1, wherein:

R is selected from the group consisting of a hydrogen atom, C_1 to C_6 alkyl, C_1 to C_6 substituted alkyl, phenyl, substituted phenyl, C_1 to C_6 phenylalkyl, C_1 to C_6

substituted phenylalkyl, C₁ to C₁₂ heterocycloalkyl, C₁ to C₁₂ substituted heterocycloalkyl, heterocycle, substituted heterocycle, C₁ to C₁₂ cycloalkyl and C₁ to C₁₂ substituted cycloalkyl.

5 5. The combinatorial library of claim 1, wherein:

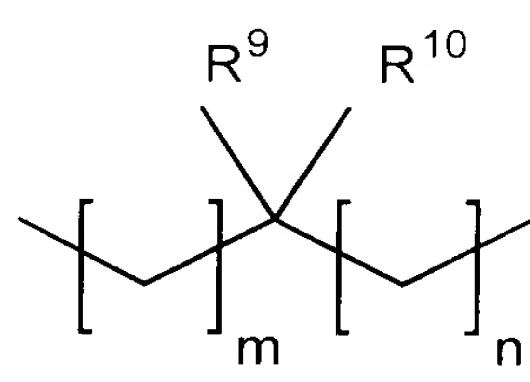
R' is the formula:



wherein:

10 W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₁₂ cycloalkylene and C₁ to C₁₂ substituted cycloalkylene; and

15 D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₁₂ alkylene, C₁ to C₁₂ substituted alkylene, -NH- and the formula:



wherein:

20 R' and R'' are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, C₁ to C₁₂ cycloalkyl, C₁ to C₁₂

substituted cycloalkyl, C₁ to C₆
phenylalkyl, C₁ to C₆ substituted
phenylalkyl, phenyl, substituted phenyl;
and m and n are independently 0, 1 or 2.

5 6. The combinatorial library of claim 1, wherein:

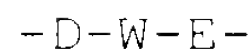
R¹ and R² are, independently, selected from a
functionalized resin and a hydrogen atom.

7. The combinatorial library of claim 1, wherein:

R¹, R², R³ and R⁴ are, independently, selected from the
10 group consisting of a hydrogen atom, halo, C₁ to C₆
alkyl, C₁ to C₆ substituted alkyl, carboxy, and the group
consisting of (i) the formula -C(O)NR³R⁴ and (ii) the
formula -C(O)R³, wherein R³ and R⁴ are, independently,
selected from the group consisting of a hydrogen atom, C₁
15 to C₆ alkyl, C₁ to C₆ substituted alkyl, C₁ to C₆
alkenyl, C₁ to C₆ substituted alkenyl, C₁ to C₆
phenylalkyl, C₁ to C₆ substituted phenylalkyl, C₁ to C₆
heterocycloalkyl, C₁ to C₆ substituted heterocycloalkyl,
heteroaryl, substituted heteroaryl, heterocycle and
20 substituted heterocycle;

R⁵ is selected from the group consisting of a hydrogen
atom, C₁ to C₆ alkyl, C₁ to C₆ substituted alkyl, phenyl,
substituted phenyl, C₁ to C₆ phenylalkyl, C₁ to C₆
substituted phenylalkyl, C₁ to C₆ heterocycloalkyl, C₁ to
25 C₆ substituted heterocycloalkyl, heterocycle, substituted
heterocycle, C₁ to C₆ cycloalkyl and C₁ to C₆ substituted
cycloalkyl;

R' is the formula:



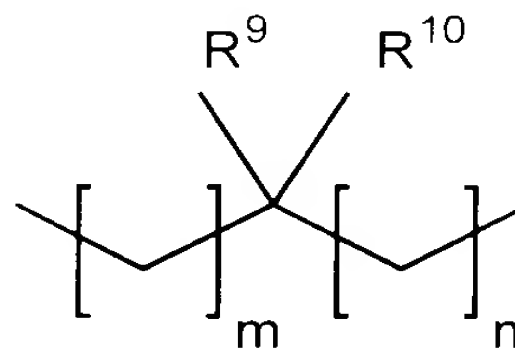
wherein:

5

W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₆ cycloalkylene and C₁ to C₆ substituted cycloalkylene; and

10

D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₆ alkylene, C₁ to C₆ substituted alkylene, -NH- and the formula:



wherein:

15

R⁹ and R¹⁰ are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₆ alkyl, C₁ to C₆ substituted alkyl, C₁ to C₆ cycloalkyl, C₁ to C₆ substituted cycloalkyl, C₁ to C₆

20

phenylalkyl, C₁ to C₆ substituted phenylalkyl, phenyl, substituted phenyl; and m and n are, independently, 0, 1 or 2; and

R and R' are, independently, selected from a functionalized resin and a hydrogen atom.

8. The combinatorial library of claim 1, wherein R' is methylene, R¹, R² and R³ are each a hydrogen atom and R⁴ is the formula -C(O)NR¹¹R¹².

9. The combinatorial library of claim 1, wherein R' is methylene, R¹, R² and R³ are each a hydrogen atom and R⁴ is the formula -C(O)R¹³, wherein R¹³ is a heterocyclic ring or substituted heterocyclic ring, wherein said ring contains at least one nitrogen atom and wherein said nitrogen atom is attached to the carbonyl carbon.

10. The combinatorial library of claim 1, wherein R' is not methylene.

11. The combinatorial library of claim 1, wherein:

15 R¹, R² and R³ are each a hydrogen atom and R⁴ is the formula -C(O)NR¹¹R¹², wherein R¹¹ is selected from the group consisting of a hydrogen atom, methyl, ethyl and benzyl and R¹² is selected from the group consisting of a hydrogen atom, benzyl, 4-methoxyphenyl, 4-phenoxyphenyl, (1-ethyl-2-pyrrolidino)methyl, pyridin-2-ylmethyl, (2-(pyridin-2-yl)ethyl, methyl, 3,3,5-trimethylcyclohexyl, cyclohexyl, 3-(trifluoromethyl)benzyl, 6-indazolyl, 2-(ethoxycarbonyl)ethyl, ethoxycarbonylmethyl, 20 cyclooctyl, cyclopropyl, (N,N-diethylamino)ethyl, 3-(2-oxo-1-pyrrolidino)propyl, (1-ethyl-2-pyrrolidinyl)methyl, pyridin-4-ylmethyl, 3-(4-morpholino)propyl, 4-methylphenyl, butyl and 2-thiazolyl;

- R is selected from the group consisting of
 3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
 4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
 4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
 5 3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
 5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
 2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
 2-norbornen-5-yl, 6-nitropiperonyl,
 2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
 10 3-hydroxyphenyl, 3,4-difluorophenyl,
 4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
 3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
 4-carboxyphenyl, 2-bromophenyl,
 2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
 15 4-methyl-5-imidazolyl, 4-hydroxyphenyl,
 2-ethyl-5-formyl-4-methylimidazolyl,
 4-chloro-2-nitrophenyl, 3-pyridyl,
 3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
 2-nitrophenyl;
- 20 R' is selected from the group consisting of methylene,
 ethylidene, ethylene, propylene, pentylene,
 isopentylidene, 3-aminocarbonylbutylidene,
 2-methylthiopropylidene, isobutylidene, phenylmethylene,
 benzylmethylene, cyclohexylethylidene,
 25 4-chlorobenzylmethylene,
 indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
 3-guanidobutylidene, -CH CH NH- and
 1,4-(cyclohexylene)-NH-;

and

- 30 R and R' are each a hydrogen atom.

12. The combinatorial library of claim 1, wherein:

R¹, R and R² are each a hydrogen atom and R³ is the formula -C(O)R⁴, wherein R⁴ is selected from the group consisting of

- 5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
morpholino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-ethoxycarbonylpiperidino and N-methylhomopiperazino;

R⁴ is selected from the group consisting of

- 10 3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
15 2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
20 3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
4-carboxyphenyl, 2-bromophenyl,
2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
4-methyl-5-imidazolyl, 4-hydroxyphenyl,
2-ethyl-5-formyl-4-methylimidazolyl,
25 4-chloro-2-nitrophenyl, 3-pyridyl,
3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
2-nitrophenyl;

R⁵ is selected from the group consisting of methylene,
ethylidene, ethylene, propylene, pentylene,

- 30 isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylenes,

benzylmethylene, cyclohexylethylidene,
4-chlorobenzylmethylene,
indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, -CH CH NH- and
5 1,4-(cyclohexylene)-NH-; and

R and R' are each a hydrogen atom.

13. The combinatorial library of claim 1, wherein:

R¹, R and R' are each a hydrogen atom and R' is the
formula -C(O)NR¹R², wherein R¹ is selected from the group
10 consisting of a hydrogen atom, methyl, ethyl and benzyl
and R² is selected from the group consisting of a
hydrogen atom, 2-(2-methoxyphenyl)ethyl,
(1-ethyl-2-pyrrolidino)methyl,
pyridin-2-ylmethyl, 2-methyl-5-chlorophenyl,
15 2-(pyridin-2-yl)ethyl, 1-ethyl-2-pyrrolidinylmethyl,
3,3,5-trimethylcyclohexyl, 3,4-methylenedioxyphenyl,
3-(trifluoromethyl)benzyl, pyridin-4-ylmethyl,
6-indazolyl, 2-(ethoxycarbonyl)ethyl, cyclooctyl,
cyclopropyl, benzyl, N,N-(diethylamino)ethyl,
20 3-(2-oxo-1-pyrrolidine)propyl, 3-(4-morpholino)propyl,
(ethoxycarbonyl)methyl and cyclohexyl;

R is selected from the group consisting of phenoxyphenyl,
4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl,
3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl,
25 4-phenoxyphenyl, 4-methoxyl-1-naphthyl,
4-bromo-2-thienyl, 4-pyridyl, isopropyl,
2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl,
4-t-butylphenyl, 2,3-dichlorophenyl,
3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,

- 2-quinolyl, 2-chloro-3,4-dimethoxyphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
5 2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 4-methylthiophenyl,
4-(trifluoromethyl)phenyl, 2-thienyl,
10 2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,
2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

- R¹ is selected from the group consisting of methylene,
15 ethylidene, ethylene, propylene, pentylene,
isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylenes,
benzylmethylenes, cyclohexylethylidene,
4-chlorobenzylmethylenes,
20 indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, hydroxyethylidene,
2-aminocarbonylpropylidene, isopentylidene,
mercaptoethylidene, 4-hydroxybenzylmethylenes,
1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-,
25 3,6-dioxaoctylene-NH-, -CH₂CH₂NH- and
1,4-(cyclohexylene)-NH-;

and

R and R² are each a hydrogen atom.

14. The combinatorial library of claim 1, wherein:

R^1 , R and R^2 are each a hydrogen atom and R^3 is the formula $-C(O)R^4$, wherein R^4 is selected from the group consisting of

- 5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
piperazino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-(ethoxycarbonyl)piperidino, N-methylhomopiperazino and
N,N'-diisopropylimidamino;
- 10 R is selected from the group consisting of phenoxyphenyl,
4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl,
3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl,
4-phenoxyphenyl, 4-methoxyl-1-naphthyl,
4-bromo-2-thienyl, 4-pyridyl, isopropyl,
- 15 2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl,
4-t-butylphenyl, 2,3-dichlorophenyl,
3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,
2-quinolyl, 2-chloro-3,4-dimethoxyphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
- 20 2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
- 25 4-dimethylaminophenyl, 4-methylthiophenyl,
4-(trifluoromethyl)phenyl, 2-thienyl,
2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,
- 30 2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

R' is selected from the group consisting of methylene,
 ethylidene, ethylene, propylene, pentylene,
 isopentylidene, 3-aminocarbonylbutylidene,
 2-methylthiopropylidene, isobutylidene, phenylmethylen
 5 benzylmethylen, cyclohexylethylidene,
 4-chlorobenzylmethylen,
 indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
 3-guanidobutylidene, hydroxyethylidene,
 2-aminocarbonylpropylidene, isopentylidene,
 10 mercaptoethylidene, 4-hydroxybenzylmethylen,
 1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-,
 3,6-dioxaoctylene-NH-, -CH CH NH- and
 1,4-(cyclohexylene)-NH-;

and

15 R and R" are each a hydrogen atom.

15. The combinatorial library of claim 1, wherein

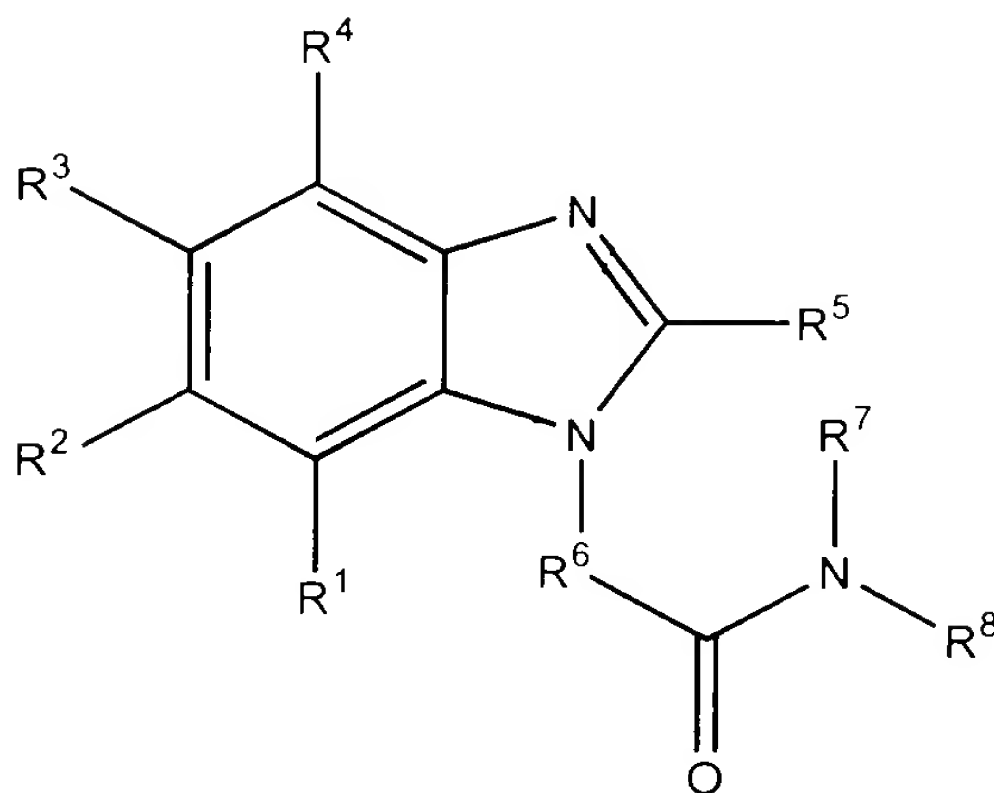
R¹, R², R³, R⁴ and R⁵ are each a hydrogen atom;

R' is the formula -C(O)NR¹R², wherein R¹ is a hydrogen
 atom and R² is selected from the group consisting of
 20 pyridin-2-ylmethyl and 3,3,5-trimethylcyclohexyl;

R' is selected from the group consisting of
 4-N,N-dimethylaminophenyl, 5-chloro-2-nitrophenyl,
 4-bromo-2-thienyl, 2-butyl, 5-nitro-2-furyl,
 4-bromophenyl, 2-thienyl, 3-thienyl, 3-cyanophenyl,
 25 4-cyanophenyl, 4-quinolyl and 4-hydroxyphenyl; and

R' is methylene.

16. A single compound of the formula:



wherein:

R¹, R², R³ and R⁴ are, independently, selected from the
 5 group consisting of a hydrogen atom, halo, hydroxy,
 protected hydroxy, cyano, C₁ to C₄ alkyl, C₁ to C₄
 alkenyl, C₁ to C₄ alkynyl, C₁ to C₄ substituted alkyl, C₁
 to C₄ substituted alkenyl, C₁ to C₄ substituted alkynyl,
 C₁ to C₄ alkoxy, C₁ to C₄ substituted alkoxy, C₁ to C₄
 10 acyloxy, C₁ to C₄ acyl, C₁ to C₄ cycloalkyl, C₁ to C₄
 substituted cycloalkyl, C₁ to C₄ cycloalkenyl, C₁ to C₄
 substituted cycloalkenyl, heterocyclic ring, substituted
 heterocyclic ring, C₁ to C₄ phenylalkyl, C₁ to C₄
 substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to
 15 C₄ substituted heterocycloalkyl, phenyl, substituted
 phenyl, naphthyl, substituted naphthyl, cyclic C₁ to C₄
 alkylene, substituted cyclic C₁ to C₄ alkylene, cyclic C

to C heteroalkylene, substituted cyclic C to C
heteroalkylene, carboxy, protected carboxy,
hydroxymethyl, protected hydroxymethyl, protected amino,
(monosubstituted)amino, protected (monosubstituted)amino,
5 (disubstituted)amino, C₁ to C₁₂ alkylamino, C₁ to C₁₂
substituted alkylamino, carboxamide, protected
carboxamide, C₁ to C₁₂ alkylthio, C₁ to C₁₂ substituted
alkylthio, C₁ to C₁₂ alkylsulfonyl, C₁ to C₁₂ substituted
alkylsulfonyl, C₁ to C₁₂ alkylsulfoxide, C₁ to C₁₂
10 substituted alkylsulfoxide, phenylthio, substituted
phenylthio, phenylsulfoxide, substituted phenylsulfoxide,
phenylsulfonyl, substituted phenylsulfonyl and the group
consisting of (i) the formula -C(O)NR¹¹R¹², (ii) the
formula -C(O)R¹¹, (iii) the formula -NR¹¹R¹², (iv) the
15 formula -SR¹¹, (v) the formula -OR¹¹ and (vi) the formula
-C(O)OR¹¹, wherein R¹¹ and R¹² are, independently, selected
from the group consisting of a hydrogen atom, C₁ to C₁₂
alkyl, C₁ to C₁₂ substituted alkyl, C₁ to C₁₂ alkenyl, C₁ to
C₁₂ substituted alkenyl, phenyl, substituted phenyl,
20 naphthyl, substituted naphthyl, C₇ to C₁₂ phenylalkyl, C₁
to C₁₂ substituted phenylalkyl, C₁ to C₁₂ heterocycloalkyl,
C₁ to C₁₂ substituted heterocycloalkyl, heteroaryl,
substituted heteroaryl, heterocycle, substituted
heterocycle, phenylsulfonyl, substituted phenylsulfonyl,
25 C₁ to C₁₂ alkylsulfonyl, C₁ to C₁₂ substituted
alkylsulfonyl, C₁ to C₁₂ alkylaminocarbonyl, C₁ to C₁₂
substituted alkylaminocarbonyl, phenylaminocarbonyl and
substituted phenylaminocarbonyl;

R¹ is selected from the group consisting of a hydrogen
30 atom, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, phenyl,
substituted phenyl, C₁ to C₁₂ phenylalkyl, C₁ to C₁₂
substituted phenylalkyl, C₁ to C₁₂ heterocycloalkyl, C₁ to
C₁₂ substituted heterocycloalkyl, carboxy, protected

carboxy, cyano, protected (monosubstituted) amino,
(disubstituted) amino, C₁ to C₄ acyl, C₁ to C₄ substituted
acyl, C₁ to C₄ alkoxycarbonyl, C₁ to C₄ substituted
alkoxycarbonyl, heterocycle, substituted heterocycle,
5 naphthyl, substituted naphthyl, C₁ to C₄ cycloalkyl, C₁ to
C₄ substituted cycloalkyl, C₁ to C₄ cycloalkenyl and C₁ to
C₄ substituted cycloalkenyl;

Rⁿ is the formula:

-D-W-E-

10

wherein:

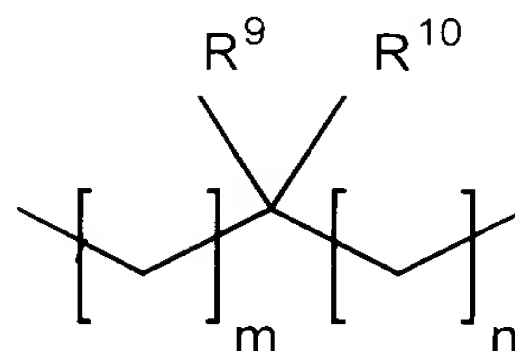
15

W is absent or selected from the group
consisting of phenylene, substituted phenylene,
C₁ to C₄ cycloalkylene, C₁ to C₄ substituted
cycloalkylene, C₁ to C₄ cycloalkenylene, C₁ to C₄
substituted cycloalkenylene, arylene,
substituted arylene, heterocyclene, substituted
heterocyclene, heteroarylene and substituted
heteroarylene;

20

and D, which is directly attached to the
nitrogen depicted in the formula, and E, which
can be absent, are independently selected from
the group consisting of C₁ to C₄ alkylene, C₁ to
C₄ alkenylene, C₁ to C₄ alkynylene, C₁ to C₄
substituted alkylene, C₁ to C₄ substituted
25 alkenylene, C₁ to C₄ substituted alkynylene, C₁
to C₄ cycloalkylene, C₁ to C₄ substituted
cycloalkylene, C₁ to C₄ cycloalkenylene, C₁ to C₄
substituted cycloalkenylene, C₁ to C₄
phenylalkylene, C₁ to C₄ substituted

phenylalkylene, C to C heterocycloalkylene
and C to C substituted heterocycloalkylene,
-NH- and the formula:



5

wherein R⁹ and R¹⁰ are, independently, selected
from the group consisting of a hydrogen atom, C
to C alkyl, C to C alkenyl, C to C
alkynyl, C to C substituted alkyl, C to C
substituted alkenyl, C to C substituted
alkynyl, C to C acyl, C to C substituted
acyl, C to C cycloalkyl, C to C substituted
cycloalkyl, C to C cycloalkenyl, C to C
substituted cycloalkenyl, a heterocyclic ring,
substituted heterocyclic ring, heteroaryl,
substituted heteroaryl, C to C phenylalkyl, C
to C substituted phenylalkyl, C to C
heterocycloalkyl, C to C substituted
heterocycloalkyl, C to C phenylalkoxy, C to
C substituted phenylalkoxy, phenyl,
substituted phenyl, naphthyl, substituted
naphthyl, cyclic C to C alkylene, substituted
cyclic C to C alkylene, cyclic C to C
heteroalkylene, substituted cyclic C to C
heteroalkylene, carboxy, protected carboxy,
hydroxymethyl and protected hydroxymethyl; and
m and n are, independently, 0, 1, 2, 3 or 4;
and

10

15

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25

R and R are, independently, selected from the group consisting of a functionalized resin, a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, phenyl, substituted phenyl, heterocycle, substituted heterocycle, 5 C₁ to C₄ cycloalkyl, C₁ to C₄ substituted cycloalkyl, C₁ to C₄ cycloalkenyl, C₁ to C₄ substituted cycloalkenyl, C₁ to C₄ alkenyl, C₁ to C₄ substituted alkenyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl and C₁ to C₄ substituted
10 heterocycloalkyl, C₁ to C₄ acyl, C₁ to C₄ substituted acyl, phenylsulfonyl, substituted phenylsulfonyl, C₁ to C₄ alkylsulfonyl, C₁ to C₄ substituted alkylsulfonyl, C₁ to C₄ alkylaminocarbonyl, C₁ to C₄ substituted alkylaminocarbonyl, phenylaminocarbonyl, substituted
15 phenylaminocarbonyl, C₁ to C₄ alkylaminothiocarbonyl, C₁ to C₄ substituted alkylaminothiocarbonyl, phenylaminothiocarbonyl and substituted phenylaminothiocarbonyl;

provided that, where R' is methylene, at least one of R₁ to R₄ must be the formula -C(O)NR¹R²; or

provided that, where R' is methylene, at least one of R₁ to R₄ must be the formula -C(O)R³, wherein R³ is a heterocyclic ring or substituted heterocyclic ring, wherein said ring contains at least one nitrogen atom and
25 wherein said nitrogen atom is attached to the carbonyl carbon; or

a pharmaceutically acceptable salt of a compound thereof.

17. The single compound of claim 16, wherein:

R^1 , R^2 , R^3 and R^4 are, independently, selected from the group consisting of a hydrogen atom, halo, C_1 to C_{12} alkyl, C_1 to C_{12} substituted alkyl, carboxy, and the group consisting of (i) the formula $-C(O)NR^5R^6$ and (ii) the formula $-C(O)R^7$, wherein R^5 and R^6 are, independently, selected from the group consisting of a hydrogen atom, C_1 to C_{12} alkyl, C_1 to C_{12} substituted alkyl, C_1 to C_{12} alkenyl, C_1 to C_{12} substituted alkenyl, C_1 to C_{12} phenylalkyl, C_1 to C_{12} substituted phenylalkyl, C_1 to C_{12} heterocycloalkyl, C_1 to C_{12} substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

18. The single compound of claim 16, wherein:

R^1 , R^2 , and R^3 are each a hydrogen atom and R^4 is selected from the group consisting of halo, C_1 to C_{12} alkyl, C_1 to C_{12} substituted alkyl, carboxy, and the group consisting of (i) the formula $-C(O)NR^{11}R^{12}$ and (ii) the formula $-C(O)R^{13}$, wherein R^{11} and R^{12} are, independently, selected from the group consisting of a hydrogen atom, C_1 to C_{12} alkyl, C_1 to C_{12} substituted alkyl, C_1 to C_{12} alkenyl, C_1 to C_{12} substituted alkenyl, C_1 to C_{12} phenylalkyl, C_1 to C_{12} substituted phenylalkyl, C_1 to C_{12} heterocycloalkyl, C_1 to C_{12} substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

19. The single compound of claim 16, wherein:

R is selected from the group consisting of a hydrogen atom, C_1 to C_{12} alkyl, C_1 to C_{12} substituted alkyl, phenyl, substituted phenyl, C_1 to C_{12} phenylalkyl, C_1 to C_{12}

123
~~120~~

substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to C₄ substituted heterocycloalkyl, heterocycle, substituted heterocycle, C₁ to C₄ cycloalkyl and C₁ to C₄ substituted cycloalkyl.

5 20. The single compound of claim 16, wherein:

R' is the formula:

-D-W-E-

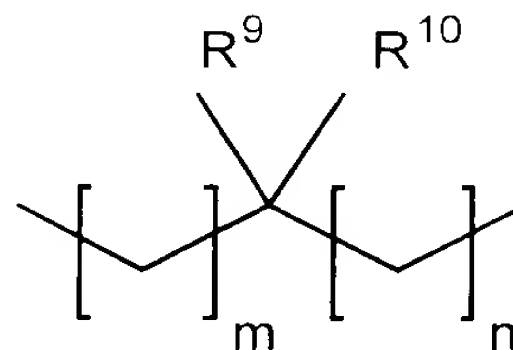
wherein:

10

W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₄ cycloalkylene and C₁ to C₄ substituted cycloalkylene; and

15

D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₄ alkylene, C₁ to C₄ substituted alkylene, -NH- and the formula:



wherein:

20

R' and R are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted

alkyl, C₁ to C₆ cycloalkyl, C₁ to C₆
substituted cycloalkyl, C₁ to C₆
phenylalkyl, C₁ to C₆ substituted
phenylalkyl, phenyl, substituted phenyl;
and m and n are, independently, 0, 1 or 2.

21. The single compound of claim 16, wherein:

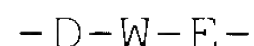
R¹ and R² are each a hydrogen atom.

22. The single compound of claim 16, wherein:

R¹, R², R³ and R⁴ are, independently, selected from the
10 group consisting of a hydrogen atom, halo, C₁ to C₆
alkyl, C₁ to C₆ substituted alkyl, carboxy, and the group
consisting of (i) the formula -C(O)NR⁵R⁶ and (ii) the
formula -C(O)R⁷, wherein R⁵ and R⁶ are, independently,
selected from the group consisting of a hydrogen atom, C₁
15 to C₆ alkyl, C₁ to C₆ substituted alkyl, C₁ to C₆
alkenyl, C₁ to C₆ substituted alkenyl, C₁ to C₆
phenylalkyl, C₁ to C₆ substituted phenylalkyl, C₁ to C₆
heterocycloalkyl, C₁ to C₆ substituted heterocycloalkyl,
heteroaryl, substituted heteroaryl, heterocycle and
20 substituted heterocycle;

R⁷ is selected from the group consisting of a hydrogen
atom, C₁ to C₆ alkyl, C₁ to C₆ substituted alkyl, phenyl,
substituted phenyl, C₁ to C₆ phenylalkyl, C₁ to C₆
substituted phenylalkyl, C₁ to C₆ heterocycloalkyl, C₁ to
25 C₆ substituted heterocycloalkyl, heterocycle, substituted
heterocycle, C₁ to C₆ cycloalkyl and C₁ to C₆ substituted
cycloalkyl;

R' is the formula:



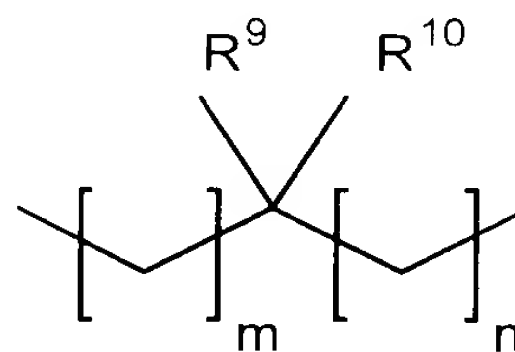
wherein:

5

W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₄ cycloalkylene and C₁ to C₄ substituted cycloalkylene; and

10

D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₄ alkylene, C₁ to C₄ substituted alkylene, -NH- and the formula:



wherein:

15

R' and R¹ are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, C₁ to C₄ cycloalkyl, C₁ to C₄ substituted cycloalkyl, C₁ to C₄

20

phenylalkyl, C₁ to C₄ substituted phenylalkyl, phenyl, substituted phenyl; and m and n are independently 0, 1 or 2; and

5 ~~5~~ R and R are each a hydrogen atom.

23. The single compound of claim 16, wherein R' is methylene, R, R and R are each a hydrogen atom and R is the formula -C(O)NR'R'.

5 24. The single compound of claim 16, wherein R' is methylene, R, R and R are each a hydrogen atom and R is the formula -C(O)R', wherein R' is a heterocyclic ring or substituted heterocyclic ring, wherein said ring contains at least one nitrogen atom and wherein said nitrogen atom
10 is attached to the carbonyl carbon.

25. The single compound of claim 16, wherein R' is not methylene.

26. The single compound of claim 16, wherein:

R, R and R are each a hydrogen atom and R is the
15 formula -C(O)NR'R', wherein wherein R' is selected from the group consisting of a hydrogen atom, methyl, ethyl and benzyl and R' is selected from the group consisting of a hydrogen atom, benzyl, 4-methoxyphenyl, 4-phenoxyphenyl, (1-ethyl-2-pyrrolidino)methyl,
20 pyridin-2-ylmethyl, 2-(pyridin-2-yl)ethyl, methyl, 3,3,5-trimethylcyclohexyl, cyclohexyl, 3-(trifluoromethyl)benzyl, 6-indazolyl, 2-(ethoxycarbonyl)ethyl, ethoxycarbonylmethyl, cyclooctyl, cyclopropyl, (N,N-diethylamino)ethyl,
25 3-(2-oxo-1-pyrrolidino)propyl, (1-ethyl-2-pyrrolidinyl)methyl, pyridin-4-ylmethyl, 3-(4-morpholino)propyl, 4-methylphenyl, butyl and 2-thiazolyl;

- R is selected from the group consisting of
 3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
 4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
 4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
 5 3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
 5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
 2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
 2-norbornen-5-yl, 6-nitropiperonyl,
 2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
 10 3-hydroxyphenyl, 3,4-difluorophenyl,
 4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
 3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
 4-carboxyphenyl, 2-bromophenyl,
 2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
 15 4-methyl-5-imidazolyl, 4-hydroxyphenyl,
 2-ethyl-5-formyl-4-methylimidazolyl,
 4-chloro-2-nitrophenyl, 3-pyridyl,
 3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
 2-nitrophenyl;
- 20 R⁶ is selected from the group consisting of
 methylenemethylene, ethylene, propylene, pentylene,
 isobutylenemethylene, 3-aminocarbonylpropylenemethylene,
 2-methylthioethylenemethylene, isopropylenemethylene,
 phenylenemethylene, benzylenemethylene,
 25 cyclohexylenemethylene, 4-chlorobenzylenemethylene,
 indol-3-ylmethylenemethylene,
 4-trifluoroacetamidobutylenemethylene,
 3-guanidopropylenemethylene, -CH CH NH- and
 1-cyclohexylene-4-NH-; and
- 30 R and R⁷ are each a hydrogen atom.

27. The single compound of claim 10, wherein:

R, R and R are each a hydrogen atom and R is the formula -C(O)R', wherein R' is selected from the group consisting of

- 5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
morpholino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-ethoxycarbonylpiperidino and N-methylhomopiperazino;

R is selected from the group consisting of

- 10 3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
15 2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
20 3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
4-carboxyphenyl, 2-bromophenyl,
2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
4-methyl-5-imidazolyl, 4-hydroxyphenyl,
2-ethyl-5-formyl-4-methylimidazolyl,
25 4-chloro-2-nitrophenyl, 3-pyridyl,
3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
2-nitrophenyl;

R' is selected from the group consisting of

- methylenemethylene, ethylene, propylene, pentylene,
30 isobutylenemethylene, 3-aminocarbonylpropylenemethylene,

2-methylthioethylmethylenes, isopropylmethylenes,
phenylmethylenes, benzylmethylenes,
cyclohexylmethylenes, 4-chlorobenzylmethylenes,
indol-3-ylmethylenes,
5 4-trifluoroacetamidobutylmethylenes,
3-guanidopropylmethylenes, -CH₂CH₂NH- and
1-cyclohexylene-4-NH-; and

R and R' are each a hydrogen atom.

28. The single compound of claim 16, wherein:

10 R¹, R and R² are each a hydrogen atom and R' is the
formula -C(O)NR³R⁴, wherein R³ is selected from the group
consisting of a hydrogen atom, methyl, ethyl and benzyl
and R⁴ is selected from the group consisting of a
hydrogen atom, 2-(2-methoxyphenyl)ethyl,
15 (1-ethyl-2-pyrrolidino)methyl,
pyridin-2-ylmethyl, 2-methyl-5-chlorophenyl,
(2-(pyridin-2-yl)ethyl), 1-ethyl-2-pyrrolidinylmethyl,
3,3,5-trimethylcyclohexyl, 3,4-methylenedioxyphenyl,
3-(trifluoromethyl)benzyl, pyridin-4-ylmethyl,
20 6-indazolyl, 2-(ethoxycarbonyl)ethyl, cyclooctyl,
cyclopropyl, benzyl, N,N-(diethylamino)ethyl,
3-(2-oxo-1-pyrrolidine)propyl, 3-(4-morpholino)propyl,
(ethoxycarbonyl)methyl and cyclohexyl;

R is selected from the group consisting of phenoxyphenyl,
25 4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl,
3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl,
4-phenoxyphenyl, 4-methoxyl-1-naphthyl,
4-bromo-2-thienyl, 4-pyridyl, isopropyl,
2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl,
30 4-t-butylphenyl, 2,3-dichlorophenyl,

- 3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,
2-quinolyl, 2-chloro-3,4-dimethoxyphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5 5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 4-methylthiophenyl,
10 4-(trifluoromethyl)phenyl, 2-thienyl,
2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,
2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;
- 15 Rⁿ is selected from the group consisting of methylene,
ethylidene, ethylene, propylene, pentylene,
isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylenes,
benzylmethylenes, cyclohexylethylidene,
20 4-chlorobenzylmethylenes,
indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, hydroxyethylidene,
2-aminocarbonylpropylidene, isopentylidene,
mercaptoethylidene, 4-hydroxybenzylmethylenes,
25 1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-,
3,6-dioxaoctylene-NH-, -CH CH NH- and
1,4-(cyclohexylene)-NH-;

and

R and Rⁿ are each a hydrogen atom.

29. The single compound of claim 16, wherein:

R, R and R are each a hydrogen atom and R is the formula -C(O)R, wherein R is selected from the group consisting of

- 5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl, 4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino, piperazino, 2-methyl-4-(3-methylphenyl)-1-piperazino, 4-(ethoxycarbonyl)piperidino, N-methylhomopiperazino and N,N'-diisopropylimidamino;
- 10 R is selected from the group consisting of phenoxyphenyl, 4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl, 3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl, 4-phenoxyphenyl, 4-methoxyl-1-naphthyl, 4-bromo-2-thienyl, 4-pyridyl, isopropyl,
- 15 2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl, 4-t-butylphenyl, 2,3-dichlorophenyl, 3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl, 2-quinolyl, 2-chloro-3,4-dimethoxylphenyl, 5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
- 20 2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl, 5-nitro-2-furyl, 4-bromophenyl, cyclopropyl, 2-norbornen-5-yl, 6-nitropiperonyl, 2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl, 3-hydroxyphenyl, 3,4-difluorophenyl,
- 25 4-dimethylaminophenyl, 4-methylthiophenyl, 4-(trifluoromethyl)phenyl, 2-thienyl, 2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl, 4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl, 1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,
- 30 2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

R' is selected from the group consisting of methylene, ethylidene, ethylene, propylene, pentylene, isopentylidene, 3-aminocarbonylbutylidene, 2-methylthiopropylidene, isobutylidene, phenylmethylene, benzylmethylene, cyclohexylethylidene, 4-chlorobenzylmethylene, indol-3-ylethylidene, 4-trifluoroacetamidopentylidene, 3-guanidobutylidene, hydroxyethylidene, 2-aminocarbonylpropylidene, isopentylidene, mercaptoethylidene, 4-hydroxybenzylmethylene, 1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-, 3,6-dioxaoctylene-NH-, -CH₂CH₂NH- and 1,4-(cyclohexylene)-NH-;

and

R¹ and R² are each a hydrogen atom.

30. The single compound of claim 16, wherein

R¹, R², R³, R⁴, R⁵ and R⁶ are each a hydrogen atom;

R' is the formula -C(O)NR¹¹R¹², wherein R¹¹ is a hydrogen atom and R¹² is selected from the group consisting of pyridin-2-ylmethyl and 3,3,5-trimethylcyclohexyl;

R⁷ is selected from the group consisting of 4-N,N-dimethylaminophenyl, 5-chloro-2-nitrophenyl, 4-bromo-2-thienyl, 2-butyl, 5-nitro-2-furyl, 4-bromophenyl, 2-thienyl, 3-thienyl, 3-cyanophenyl, 4-cyanophenyl, 4-quinolyl and 4-hydroxyphenyl; and

R' is methylene.

31. A method of preparing a benzimidazole derivative compound, comprising:

- (a) coupling a first compound having a substituent of the formula $\text{-NH-C(O)-variable group-NH-}$ with a benzene compound that is substituted with a nitro group and a halo group in an ortho relationship on the benzene ring, the benzene compound optionally substituted with a variable group at one or more of the remaining 4 positions of the benzene ring, resulting in a benzene compound substituted with a nitro group and a monosubstituted amino group in an ortho relationship on the benzene ring;
- (b) reducing the nitro group of the benzene compound resulting from step (a); and
- (c) coupling the compound resulting from step (b) with an aldehyde compound, resulting in a benzimidazole derivative compound.

32. The method of claim 31, wherein said first compound is attached to solid support.

33. The method of claim 31, wherein said variable group on said benzene compound in step (a) is a carboxyl.

34. The method of claim 33, wherein said carboxyl group is coupled with a monosubstituted amine compound, a disubstituted amine compound, a cyclic imino compound or an alcohol compound.